UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,641	12/05/2003	Jung-Gi Kim	P56963	9635

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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-25* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☒ All   b)☐ Some *   c)☐ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date *6-18-04;12-5-03*.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 23 is objected to because of the following informalities: There is insufficient

antecedent basis for the limitation 'the sub-groups' in the claim. Appropriate correction is

required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-25 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No.

7,280,530 by Chang et al, hereinafter Chang.

Regarding claim 1, Chang discloses a voice over Internet protocol call control apparatus

(Fig. 2; Fig. 5) in a voice over Internet protocol private branch exchange (Fig. 2, 34; Fig. 5, 34;

col. 27, line 49 – col. 28, line 19), the apparatus comprising: a service class decision unit (Fig. 2,

34; Fig. 5, 34) for receiving a voice over Internet protocol call service request from a subscriber

(col. 27, lines 49-55), deciding a service class (i.e. Basic VoIP call, 'on-net call'; col. 27, lines

49-60; col. 41, lines 45-58) for indicating priority of a voice over Internet protocol call service,

and outputting the service class (col. 27, lines 49-60); a service level decision unit (Fig. 2, 26;

caller gateway server; Fig. 5, 4) for measuring band width usage of the voice over Internet

protocol trunk, deciding a service level (i.e. QoS) according to the band width usage so as to

determine which service classes can use the voice over Internet protocol call service, and

outputting the service level (col. 31, lines 58-63); and a signal processing unit (Fig. 2, 26; caller

gateway server; Fig. 5, 4) for deciding whether the voice over Internet protocol call with the

service class transmitted from the service class decision unit can be serviced in the service level

of the voice over Internet protocol trunk transmitted from the service level decision unit, and

when the voice over Internet protocol call is serviceable, providing a voice over Internet protocol

call service (col. 15, line 62 – col. 16, line 14) and when the voice over Internet protocol call is

not serviceable, providing a voice call service over the public switched telephone network (col.

31, lines 58-67).

Regarding claim 2, the apparatus according to claim 1, wherein Chang discloses the

service level decision unit accumulates a bandwidth every time a voice over Internet protocol

call service is provided, and decides the service level of the voice over Internet protocol trunk

according to an occupancy rate of the accumulated bandwidth out of total bandwidth (col. 6,

lines 26-39; col. 31, lines 58-63).

Regarding claim 3, the apparatus according to claim 1, wherein Chang discloses the

service class decision unit decides the class of service by referring to a voice over Internet

protocol service class table per subscriber according to a characteristic of the subscriber (col. 12,

lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39).

Regarding claim 4, the apparatus according to claim 3, wherein Chang discloses the voice

over Internet protocol service class table per subscriber reflects characteristics of each

department in a company (col. 24, lines 33: DepartmentID; col. 24, line 54 – col. 25, line 10).

Regarding claim 5, the apparatus according to claim 1, wherein Chang discloses the

service class decision unit decides the class of service by referring to a voice over Internet

protocol service class table per call type according to a type of the call (col. 27, lines 49-62).

Regarding claim 6, the apparatus according to claim 5, wherein Chang discloses the voice

over Internet protocol service class table per call type reflects characteristics of each call (col. 27,

lines 49-62).

Regarding claim 7, the apparatus according to claim 1, wherein Chang discloses the

service class decision unit decides the class of service by referring to both a voice over Internet

protocol service class table per subscriber according to a characteristic of the subscriber (col. 12,

lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39) and a voice over Internet protocol service

class table per call type according to a characteristic of the call requested (col. 27, lines 49-62).

Regarding claim 8, the apparatus according to claim 7, wherein Chang discloses the voice

over Internet protocol service class table per subscriber is prepared based on characteristics of

each department in a company (col. 24, lines 33: DepartmentID; col. 24, line 54 – col. 25, line

10), and the voice over Internet protocol service class table per call type is prepared based on

characteristics of each call (col. 27, lines 49-62).

Regarding claim 9, the apparatus according to claim 1, wherein Chang discloses the

service class decision unit decides the class of service by referring to cost for a voice over

Internet protocol service of the call (col. 6, lines 26-39; col. 7, lines 26-32).

Regarding claim 10, the apparatus according to claim 1, Chang discloses further

comprising: a central office matching unit (Fig. 5, 126; called gateway server) for matching a

public switched telephone network and the private branch exchange (col. 31, lines 63-67; col. 33,

lines 11-54); a voice over Internet protocol gateway (Fig. 3, 62) for performing a protocol

matching process with respect to an outgoing call from the private branch exchange, and

providing a voice call conforming to voice over Internet protocol (col. 28, lines 7-9); and a

gateway matching unit (Fig. 3, 53) for matching the voice over Internet protocol gateway and the

private branch exchange (col. 28, lines 5-7).

Regarding claim 11, Chang discloses a voice over Internet protocol call control method in

a private branch exchange (Fig. 5, 34; col. 27, line 49 – col. 28, line 19), the method comprising

the steps of: in the private branch exchange, when a subscriber sends a voice over Internet

protocol call service request, deciding a voice over Internet protocol service class (i.e. Basic

VoIP call, 'on-net call'; col. 27, lines 49-60; col. 41, lines 45-58); deciding whether the voice

over Internet protocol call service can be provided in a voice over Internet protocol trunk service

level (i.e. QoS) corresponding to the voice over Internet protocol service class (col. 31, lines 58-

63); when the voice over Internet protocol call service cannot be provided, providing a voice call

service through a public switched telephone network (col. 31, lines 63-67), and when the voice

over Internet protocol call service can be provided, looking up an available voice over Internet

protocol trunk port and providing the voice over Internet protocol call service through the voice

over Internet protocol trunk (col. 15, line 62 – col. 16, line 14); and when providing the voice

over Internet protocol call service, changing the voice over Internet protocol trunk service level

(col. 31, lines 58-67).

Regarding claim 12, the method according to claim 11, wherein Chang discloses the

private branch exchange decides the service class by referring to a voice over Internet protocol

service class table per subscriber according to a characteristics of the subscriber (col. 12, lines

29-46; col. 24, lines 1-40; col. 38, lines 29-39).

Regarding claim 13, the method according to claim 11, wherein Chang discloses the

private branch exchange decides the service class by referring to a voice over Internet protocol

service class table per call type according to a characteristic of the call (col. 27, lines 49-62).

Regarding claim 14, the method according to claim 11, wherein Chang discloses the

private branch exchange decides the service class by referring to both a voice over Internet

protocol service class table per subscriber according to a characteristics of the subscriber (col.

12, lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39) and a voice over Internet protocol

service class table per call type according to a characteristic of the call (col. 27, lines 49-62).

Regarding claim 15, the method according to claim 11, wherein Chang discloses the

voice over Internet protocol trunk service level is decided based on an occupancy rate of a

bandwidth out of a total bandwidth, the bandwidth being accumulated every time a voice over

Internet protocol call service is provided (col. 6, lines 26-39; col. 31, lines 58-63).

Regarding claim 16, Chang discloses an apparatus (Fig. 2, 4; Fig. 5) comprising: a first

unit (Fig. 2, 34; Fig. 5, 34; PBX) receiving a voice over Internet protocol call service request

from a subscriber (col. 27, lines 49-55), deciding a service class (i.e. Basic VoIP call, 'on-net

call'; col. 27, lines 49-60; col. 41, lines 45-58), and outputting the service class (col. 27, lines 49-

60); a second unit (Fig. 2, 26; caller gateway server; Fig. 5, 26) measuring a service level (i.e.

QoS) of a voice over Internet protocol trunk and outputting the service level (col. 31, lines 58-

67); a third unit (Fig. 2, 26; called gateway server; Fig. 5, 126) matching a public switched

telephone (Fig. 5, 16) network and a private branch exchange (Fig. 5, 134); a fourth unit (Fig. 3,

62) performing a protocol matching process with respect to an outgoing call from the private

branch exchange, and providing a voice call conforming to voice over Internet protocol (col. 28,

lines 7-9); a fifth unit (Fig. 3, 53) matching the fourth unit and the private branch exchange (col.

28, lines 5-7); and a sixth unit (Fig. 2, 26; caller gateway server; Fig. 5, 4) deciding whether the

voice over Internet protocol call with the service class transmitted from the first unit can be

serviced or established in a service level of the voice over Internet protocol trunk decided in the

service level transmitted from the second unit (col. 31, lines 58-67), and when the voice over

Internet protocol call is serviceable, providing a voice over Internet protocol call service through

the fifth unit and the fourth unit (col. 28, lines 1-19; col. 33, lines 11-54), and when the voice

over Internet protocol call is not serviceable, providing a voice call service over the public

switched telephone network via the third unit (col. 7, lines 17-32).

Regarding claim 17, the apparatus according to claim 16, wherein Chang discloses the

second unit accumulates a bandwidth every time a voice over Internet protocol call service is

provided, and decides the service level of the voice over Internet protocol trunk according to an

occupancy rate of the accumulated bandwidth out of a total bandwidth (col. 6, lines 26-39; col.

31, lines 58-63).

Regarding claim 18, the apparatus according to claim 16, wherein Chang discloses the

first unit decides the class of service by referring to a voice over Internet protocol service class

table per subscriber according to a characteristic of the subscriber (col. 12, lines 29-46; col. 24,

lines 1-40; col. 38, lines 29-39).

Regarding claim 19, the apparatus according to claim 18, wherein Chang discloses the

voice over Internet protocol service class table per subscriber reflects characteristics of each

group of subscribers from a plurality of groups of subscribers (col. 12, lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39).

Regarding claim 20, the apparatus according to claim 16, wherein Chang discloses the first unit decides the class of service by referring to a voice over Internet protocol service class table per call type according to a type of the call (col. 27, lines 49-62).

Regarding claim 21, the apparatus according to claim 20, wherein Chang discloses the voice over Internet protocol service class table per call type reflects characteristics of each call (col. 27, lines 49-62).

Regarding claim 22, the apparatus according to claim 16, wherein Chang discloses the first unit decides the class of service by referring to both a voice over Internet protocol service class table per subscriber according to a characteristic of the subscriber (col. 12, lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39) and a voice over Internet protocol service class table per call type according to a characteristic of the call requested (col. 27, lines 49-62).

Regarding claim 23, the apparatus according to claim 22, wherein Chang disclose the voice over Internet protocol service class table per subscriber is prepared based on characteristics of each sub-group in a group comprising a plurality of the sub-groups (col. 12, lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39), and the voice over Internet protocol service class table per call type is prepared based on characteristics of each call (col. 27, lines 49-62).

Regarding claim 24, Chang discloses a method, comprising: determining a service class (i.e. Basic VoIP call, 'on-net call'; col. 27, lines 49-60; col. 41, lines 45-58), comprising of: receiving a voice over Internet protocol call service request from a subscriber by way of a public branch exchange (Fig. 5, 34; col. 27, line 49 – col. 28, line 19); determining a voice over Internet

protocol service class by referring to a voice over Internet protocol service class table per

subscriber (col. 12, lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39); and determining the

voice over Internet protocol service class for the call referring to the voice over Internet protocol

service class table per call type (col. 27, lines 49-62) when the voice over Internet protocol

service can be provided in a voice over Internet protocol trunk service level (i.e. QoS)

corresponding to the voice over Internet protocol service class of the subscriber; determining

whether a voice over Internet protocol service can be provided in the service level, comprising

of: determining whether the voice over Internet protocol service can be provided in the voice

over Internet protocol trunk service level corresponding to the voice over Internet protocol

service class of the subscriber (col. 12, lines 29-46; col. 24, lines 1-40; col. 38, lines 29-39); and

determining whether the voice over Internet protocol call service can be provided in a voice over

Internet protocol trunk service level corresponding to the voice over Internet protocol service

class of the call (col. 31, lines 58-63); and providing the voice over Internet protocol service,

comprising of: looking up an available voice over Internet protocol trunk port when the voice

over Internet protocol call service can be provided in the voice over Internet protocol trunk

service level corresponding to the voice over Internet protocol service class of the call (col. 15,

line 62 – col. 16, line 14); providing the voice over Internet protocol call service through the

available voice over Internet protocol trunk port (col. 15, line 62 – col. 16, line 14); and

providing a voice call service through the public switched telephone network when the voice

over Internet protocol service cannot be provided in the voice over Internet protocol trunk

service level corresponding to the voice over Internet protocol service class of the call (col. 31,

lines 63-67).

Regarding claim 25, the method according to claim 24, wherein Chang discloses the

voice over Internet protocol trunk service level is decided based on an occupancy rate of a

bandwidth out of a total bandwidth, the bandwidth being accumulated every time a voice over

Internet protocol call service is provided (col. 6, lines 26-39; col. 31, lines 58-63).

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. See PTO-892 Form.

5.   Any response to this action should be mailed to:

<div align="center">

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

</div>

Or faxed to:

(571) 273-8300 (for formal communications intended for entry)

Or call:

(571) 272-2600 (for customer service assistance)

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lisa Hashem whose telephone number is (571) 272-7542. The

examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fan Tsang can be reached on (571) 272-7547. Any inquiry of a general nature or

relating to the status of this application or proceeding should be directed to the Group

receptionist whose telephone number is (571) 272-2600.

6.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fan Tsang/
Supervisory Patent Examiner, Art Unit 2614

/Lisa Hashem/
Examiner, Art Unit 2614
April 4, 2008